

ABSTRACT

Rice is a part of grain that has been separated from the chaff and has passed through various post-harvest processes. Rice is an important component in the daily meals for some countries in the world, especially Indonesia. There are several types of rice that familiar in Indonesia which are rice setra ramos (IR 64), pandan wangi rice, Rojolele rice, IR 42 rice, and others. This final project takes one type of rice that most consumed by the people in Indonesia because the cheap price but has soft texture which is of setra ramos rice (IR 64).

The image of processed rice is already in digital form (photo). The method used in this final project is digital image processing. The steps to be performed include: pre-processing, feature extraction, and classification. The characteristic extraction method that used in this final project is Haar Wavelet based on texture as one of the physical characteristics of rice. As for the classification of quality is using Support Vector Machine method.

The result of this research is a system that can classified the quality of the rice from the worst to the best quality which is quality 10,11, and 12 with LBP value [8,1], using uniform LBP, and the amount of datas for each example image and the experiment image is 30, the highest accuracy 96,67% is established when using SVM kernel poly OAA, and accuracy reached 88,89% using kernel poly OAO.

Keywords : *Rice, Quality of Rice, Haar Wavelet, Support Vector Machine*